

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

22



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/539,313	03/30/2000	Chung-Ho Huang	LAM1P136/P0602	7930
22434	7590	08/26/2004	EXAMINER	
BEYER WEAVER & THOMAS LLP P.O. BOX 778 BERKELEY, CA 94704-0778			ENGLAND, DAVID E	
			ART UNIT	PAPER NUMBER
			2143	
DATE MAILED: 08/26/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/539,313

Applicant(s)

HUANG ET AL.

Examiner

David E. England

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 9 are presented for examination.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the number of alarms, alarm identification numbers, and descriptions of the alarms must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitation of, “...*the number of alarms...*” is not found in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kail (6225901) in view of Nakamura et al. (6233492) (hereinafter Nakamura) in further view of Sandelman et al. (6535123) (hereinafter Sandelman).

6. As per claim 1, Kail teaches a computer implemented method for communicating between a computing system of a process module, and a first sensor, comprising the steps of:
7. initializing the computing system of the process module, (e.g. col. 6, line 49 – col. 7, line 20);
8. transmitting a connect message from the first sensor to the computing system of the process module, (e.g. col. 6, line 49 – col. 7, line 20);
9. transmitting a command to get reportable specification from the computing system of the process module to the first sensor, (e.g. col. 6, line 49 – col. 7, line 59 & col. 7, line 60 – col. 8, line 57); and
10. transmitting a reportable specification message from the first sensor to the computing system of the process module, (e.g. col. 7, line 21 – col. 8, line 28 & col. 7, line 60 – col. 8, line 57). Kail does not teach the process module having a process chamber, initializing the first sensor, which is able to measure a first parameter in the process chamber; and
11. a reportable specification with informs the process module computing system of the type of data that will be provided from the first sensor.
12. Nakamura teaches the process module having a process chamber, initializing the first sensor, which is able to measure a first parameter in the process chamber, (e.g. col. 3, line 35 – col. 4, line 67). It would be obvious to one skilled in the art at the time the invention was made to combine Nakamura with Kail because it would be more efficient for the computing system to utilize a network type connection so the user can operate the sensor and process chamber from different locations in a building.

Art Unit: 2143

13. Sandelman teaches a reportable specification with informs the process module computing system of the type of data that will be provided from the first sensor, (e.g. col. 11, line 61 – col. 12, line 19, *“At step S3, it is determined what type of error message has been received.”*). It would be obvious to one skilled in the art at the time the invention was made to combine Sandelman with the combine system of Kail and Nakamura because if a sensor can sense multiple types of information, but the system only needs one type from said sensor, the sensor be designated as a specific type of sensor, (example: only sense temperature). This could make for a faster system since it is not required for the sensor to constantly be reformatted for each different element it can sense. Furthermore, knowing the type of message could have the messages that require immediate action pass onto a process to begin configuration.

14. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kail (6225901) in view of Nakamura (6233492) in further view of Sandelman (6535123) in further view of Steen, III et al. (6510350) (hereinafter Steen) in further view of Kosugi et al. (6204768) (hereinafter Kosugi).

15. As per claim 2, Kail, Nakamura and Sandelman do not specifically teach spawning within the computing system of the process module a connection monitor task;

16. spawning from the connection monitor task within the computing system of the process module a first sensor messaging task;

17. transmitting an acknowledgement of the command to get reportable specification from the first sensor to the computing system of the process module; and

Art Unit: 2143

18. transmitting an acknowledgement of the reportable specification message from the computing system of the process module to the first sensor. Steen teaches spawning within the computing system of the process module a connection monitor task, (e.g. col. 11, line 4 – col. 12, line 21);

19. spawning from the connection monitor task within the computing system of the process module a first sensor messaging task, (e.g. col. 11, line 60 – col. 12, line 56);

20. transmitting an acknowledgement of the command to get reportable specification from the first sensor to the computing system of the process module, (e.g. col. 9, line 63 – col. 10, line 29). It would be obvious to one skilled in the art at the time the invention was made to combine Steen with the combine system of Kail, Nakamura and Sandelman because

21. Steen does not specifically teach transmitting an acknowledgement of the reportable specification message from the computing system of the process module to the first sensor. Kosugi teaches transmitting an acknowledgement of the reportable specification message from the computing system of the process module to the first sensor, (e.g. col. 8, lines 28 – 48 & col. 9, lines 18 – 29). It would be obvious to one skilled in the art at the time the invention was made to combine Kosugi with the combine system of Kail, Nakamura and Sandelman because it would be more efficient for a system to utilize the properties of an acknowledgement signal so in case of a bad transmission the sensor would know that the computing system did or did not get the signal and to retransmit the signal.

22. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kail (6225901) in view of Nakamura (6233492) in further view of Sandelman (6535123) in further view of Steen,

Art Unit: 2143

III et al. (6510350) (hereinafter Steen) in further view of Kosugi et al. (6204768) (hereinafter Kosugi) in further view of Chari et al. (6425006) (hereinafter Chari).

23. As per claim 3, Kail and Nadamura do not specifically teach transmitting command to get an alarm table command from the first sensor to the computing system of the process module;

24. transmitting an acknowledgement of the command to get the alarm table from the computing system of the process module to the first sensor;

25. transmitting an alarm table from the computing system of the process module to the first sensor, wherein the alarm table designates the number of alarms, alarm identification numbers, and descriptions of the alarms; and

26. transmitting an acknowledgement of the alarm table from the first sensor to the computing system of the process module.

27. Sandelman teaches the use of routing tables and router that are connected to sensor and other networking devices that could be interpreted as transmitting command to get an alarm table command from the first sensor to the computing system of the process module, (e.g. col. 3, lines 20 – 65 & col. 8, line 53 – col. 9, line 15);

28. transmitting an alarm table from the computing system of the process module to the first sensor, (e.g. col. 3, lines 20 – 65 & col. 8, line 53 – col. 9, line 15). It would be obvious to one skilled in the art at the time the invention was made to combine Sandelman with the combine system of Kail and Nakamura because it is common knowledge that when a new router is installed and turned on, it requests from other networking devices a routing table so to update its

Art Unit: 2143

table and route information so to act as an interface to at least one of the sensors that would be connected to it.

29. Sandelman does not specifically teach transmitting an acknowledgement of the command to get the alarm table from the computing system of the process module to the first sensor;

30. transmitting an acknowledgement of the alarm table from the first sensor to the computing system of the process module. Kosugi teaches transmitting an acknowledgement of the command to get the alarm table from the computing system of the process module to the first sensor, (e.g. col. 8, lines 28 – 48), and Steen teaches transmitting an acknowledgement of the alarm table from the first sensor to the computing system of the process module, (e.g. col. 9, line 63 – col. 10, line 29). It would be obvious to one skilled in the art at the time the invention was made to combine Kosugi and Steen with the combine system of Kail, Nakamura and Sandelman because if the computing system and the first sensor could not acknowledge each others transmissions the system could accumulate transmission errors and improper updating of the measurements that the sensor detects. Chari teaches wherein the alarm table designates the number of alarms, alarm identification numbers, and descriptions of the alarms, (e.g. col. 4, lines 23 – 38). It would be obvious to one skilled in the art at the time the invention was made to combine Chari with the combine system of Kail, Nakamura, Sandelman, Kosugi and Steen because it allows the user to view the alert log file and keep track of each type of alert and when they occurred.

31. Claims 4 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kail (6225901) in view of Nakamura (6233492) in further view of Sandelman (6535123) in further

view of Steen (6510350) in further view of Kosugi (6204768) in further view of Chari (6425006) in further view of Halpern (5301122).

32. As per claim 4, Kail, Nakamura, Sandelman and Chari do not specifically teach transmitting command to get time and initialization data from the first sensor to the computing system of the process module;

33. transmitting time and initialization data from the computing system of the process module to the first sensor. Halpern teaches transmitting command to get time and initialization data from the first sensor to the computing system of the process module, (e.g. col. col. 11, lines 13 – 49);

34. transmitting time and initialization data from the computing system of the process module to the first sensor, (e.g. col. col. 11, lines 13 – 49). It would be obvious to one skilled in the art at the time the invention was made to combine Halpern with the combine system of Kail, Nakamura, Sandelman and Chari because of similar reasons stated above and it would be more efficient in the updating process to have time and initialization data so when the computing system does attempt to update its information the computing system can compare the two different times and initialization data and to determine which ones are the latest versions of information to save.

35. Halpern does not specifically teach transmitting an acknowledgement of the command to get time and initialization data from the computing system of the process module to the first sensor;

Art Unit: 2143

36. transmitting an acknowledgement of the time and initialization data from the first sensor to the computing system of the process module. Kosugi teaches transmitting an acknowledgement of the command to get time and initialization data from the computing system of the process module to the first sensor, (e.g. col. 8, lines 28 – 48), and Steen teaches transmitting an acknowledgement of the time and initialization data from the first sensor to the computing system of the process module, (e.g. col. 9, line 63 – col. 10, line 29). It would be obvious to one skilled in the art at the time the invention was made to combine Kosugi and Steen with the combine system of Kail, Nakamura, Sandelman, Halpern and Chari because of similar reasons as stated above.

37. As per claim 5, Kail, Kosugi, Sandelman, Halpern and Chari do not specifically teach transmitting a process related command related to the execution of an action in the process chamber from the computing system of the process module to the first sensor;

38. executing the action in the process chamber, wherein said action relates to the processing of semiconductor related devices; and

39. transmitting an acknowledgement of the process related command from the first sensor to the computing system of the process module. Nakamura teaches transmitting a process related command related to the execution of an action in the process chamber from the computing system of the process module to the first sensor, (e.g. col. 3, line 35 – col. 4, line 67);

40. executing the action in the process chamber, wherein said action relates to the processing of semiconductor related devices, (e.g. col. 3, line 35 – col. 4, line 67). It would be obvious to one skilled in the art at the time the invention was made to combine Nakamura with the combine

Art Unit: 2143

system of Kail, Kosugi, Sandelman, Halpern and Chari because it would be more efficient for a system to remotely have the ability to execute a process to different semiconductor related devices as opposed to having one computer for every one process chamber.

41. Nakamura does not specifically teach transmitting an acknowledgement of the process related command from the first sensor to the computing system of the process module. Steen teaches transmitting an acknowledgement of the process related command from the first sensor to the computing system of the process module, (e.g. col. 9, line 63 – col. 10, line 29). It would be obvious to one skilled in the art at the time the invention was made to combine Steen with the combine system of Kail, Nakamura, Kosugi, Sandelman, Halpern and Chari because of similar reasons as stated above.

42. Claims 6 – 9 are rejected for similar reasons as stated above. Furthermore, in reference to a second and third sensor, Kosugi teaches a second and a third sensor, (e.g. col. 6, lines 3 – 33 & Figure 1). It would be obvious to one skilled in the art at the time the invention was made to combine Kosugi with the combine system of Kail, Nakamura, Steen, Sandelman and Halpern because having more than one or two sensors would make a system gather information from different locations at a faster pace than having one sensor having to electronically relocate to a different section of the system to gather information about the system, therefore making the system more efficient.

Response to Arguments

43. Applicant's arguments with respect to claims 1 – 9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 703-305-5333. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David E. England
Examiner
Art Unit 2143

De



DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100